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22 June 1981

MEMORANDUM FOR: The Director of Central Intelligence

FROM:

Chairman  
Military-Economic Advisory Panel

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SUBJECT: Review of Soviet Military-Economic Analysis

As mentioned during our 8 May meeting with you, the Panel has undertaken to perform by the fall of 1981 a comprehensive review of the Soviet military-economic (i.e., defense resources) and overall economic analysis programs. With the exceptional cooperation of the Office of Strategic Research, we were able to make very good progress on the military-economic portion of the program at our May session; we hope to make comparable progress on the overall Soviet economic program in the fall.

The value of Soviet defense activities is measured in rubles, for analysis of resource allocation and growth as this might appear to Kremlin planners, and in dollars, for size comparisons with US spending. CIA also costs US defense activities in rubles, for a complementary method of sizing military spending.

We were unable to deal with the issue of comprehensiveness of coverage in the estimates at this meeting. In general, however, 1) we were pleased to see that dollar costing of Soviet defense seems to have stood the test of time, and our suggestions for improvement relate to conceptual clarifications. 2) There also has been significant improvement in estimating Soviet defense spending in ruble terms, although there are major problems that remain unsolved. Estimates of Soviet defense spending in rubles and as a percent of the Soviet GNP may change significantly as prices are updated. It is important for the Agency's credibility that the likelihood of these changes be indicated in advance, even though we do not yet know their direction. 3) There is some additional analysis pertaining both to dollar and ruble estimates which should be undertaken.

Taking the three areas in order:

1. *Estimating the Dollar Cost of Soviet Defense.* We were impressed by the robustness of the dollar estimates as they have been refined over time, and against a wide range of internal consistency checks applied by OSR to the entire structure. We were particularly gratified to see the great progress OSR has made in moving from US analogues as the basis of dollar cost estimates of procurement to costing of actual Soviet equipment and designs. This progress significantly improves the credibility of the procurement estimates.

The personnel component of the dollar cost estimates often has been criticized for the use of US pay and allowance rates to cost Soviet manpower. There is nothing wrong with the procedure, especially as the actual US rates reflect opportunity cost in the United States far better than any suggested set of alternatives. However, Agency reports could try to disarm this criticism more effectively than they already do by placing greater emphasis on the relative insensitivity of the aggregate estimates to the use of US pay scales. *Relative US-Soviet defense spending for non-personnel components is little different from the relative expenditures including personnel costs.*

Some of the criticism directed at the dollar cost estimates shows a misunderstanding of the conceptual framework. There are two possible approaches to dollar cost measurement. The first asks, what would it cost the US in dollars to man, operate, and equip the given Soviet forces as the Soviets do? The second asks, what would it cost the US to raise and maintain forces with the same capabilities as those of the USSR? The first concept yields the dollar costs of a particular set of *forces*; the second provides a measure of the dollar cost of a particular level of *capability*. To many people, the second concept seems preferable, but it requires difficult and perhaps arbitrary judgments on relative capabilities of Soviet and American systems. On grounds of replicability, OSR has chosen to operate with the first concept. The Panel does not fault the choice, but it believes the Agency should produce an unclassified paper explaining the conceptual and methodological differences in the two concepts with sample calculations demonstrating the different outcomes under the two methods. Such a paper could remove one of the important sources of confusion in the public debate on the size of the Soviet defense budget.

2. *Estimating Soviet Spending in Rubles.* We have no problem with the basic concept of measuring the rate of growth in Soviet military spending valued at constant ruble prices of a particular base year. There are, however, two serious problems in practice.

a. At present, the ruble estimates are based on 1970 prices. As time goes on 1970 prices becomes a less and less accurate representation of actual resource tradeoffs in the Soviet economy. Thus, 1970 price-based findings on the structure and rate of growth of spending in the 1980s could be significantly distorted. In addition, it is possible that the burden of Soviet defense (the defense share of GNP) would appear different in prices of the 1980s than in 1970 prices.\* This would happen if the pace of cost inflation since 1970 were different in the Soviet defense sector than in the economy as a whole. There is great uncertainty now on the direction and size of the changes in the military expenditure estimates that will result from updating to a new price base. Moreover, in the ordinary course of events, it is likely to be a number of years before OSR can accumulate sufficient information to make the transition to, say, 1982 prices.

b. Direct ruble estimates exist for only half the Soviet defense budget. Worse still, that half includes R&D expenditures, which is believed to be the weakest component of OSR estimates.\*\* The other half of the Soviet budget is first estimated in dollars and then converted to rubles. However, the ruble-dollar ratios used to make these conversions are subject to varying margins of error.

In 1975-76, analysts realized that the ruble-dollar ratios then in use were grossly understated; this led to the painful decision to double the ruble estimate for the base-year, 1970. At that time, the root of the error was failure to recognize that a major change in Soviet pricing policy had taken place at the time of the 1967 price reform. It does not seem likely that another such transformation will take place in 1982, when the Soviet government carries out its latest projected price reform. Moreover, OSR now pays more attention to consistency checks against Soviet economic

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\* Estimates of GNP will also change as prices are updated, and so defense spending as a percent of GNP will change. We hope to investigate OER's GNP estimates at an early opportunity.

\*\* For lack of time, we were unable to hear a briefing on R&D prepared by OSR. The subject will be on our fall agenda.

statistics than was the case in the mid-1970s. As was indicated under 2a above, however, when at some point a change is made from using 1970 prices to those of a year in the 1980s this is likely to lead to changes in the results of the ruble analysis. It would be particularly important, in making that transition, to be reasonably confident that the present approach to estimating ruble-dollar ratios will generate accurate ratios stated in 80s' prices.

OSR is aware of these problems and has initiated a challenging and perhaps costly effort to update the ruble-dollar price ratios. The Panel believes that before launching this major effort, OSR (perhaps in collaboration with OER) should organize a workshop with participation of outside experts to review the problems and suggest alternative ways of dealing with them. In the meantime, we wish to (i) strongly encourage OER in its intention to construct and maintain a running set of Soviet national accounts in current prices, which is a necessary adjunct to the work of updating the ruble military expenditure estimates, and (ii) urge OSR to start making the consumers of its estimates aware of these price problems by suitable references in its publications and in appearances by Agency representatives. The latter recommendation is very important if the Agency is to maintain its credibility.

### 3. Other Areas of Analysis.

a. As noted earlier, US defense activities can be costed in rubles for a size comparison with Soviet ruble spending that is the complement of the dollar cost comparison. In principle, both are pertinent measures of relative size. The Agency has concentrated on costing Soviet activities in dollars because that is less difficult than ruble costing US activities and also because the US policy community is more interested in dollar comparisons. However, because ruble valuation of both sides inevitably shows a smaller ratio of Soviet to American defense than does dollar valuation, the Agency's concentration on dollar comparisons is controversial. Moreover, there is considerable misinformation among the public on the methodology and reliability of the Agency's ruble size comparison. We hope to hear a detailed presentation on this subject at our fall 1981 meeting.

b. Measurement of annual defense expenditures serves a number of useful purposes--e.g., analysis of defense burden and resource allocation policy. However, our ultimate interest in US-Soviet comparisons of size is relative military capability and this is a function of all forces in being, not just those added during the accounting year. Thus, there is a need for comparative estimates

of stocks. Since we have relatively good data on inventories and prices of Soviet equipment, a good place to start would be to estimate the current value of Soviet military hardware inventory. Human capital—measuring current value in terms of training and readiness of the military personnel—is more difficult and can wait. Work on equipment stock values was begun several years ago but progress has been slow. Within the limits of current priorities, it would be desirable to accelerate the work in this area in terms of both concept and data.

c. Military power in a broader sense also is significantly affected by the availability of economic reserves. Changes in strategic non-military reserves—grain, petroleum, metals—may be an important indicator of alterations in Soviet military policy and leadership intentions. There is still much work that remains to be done to improve our monitoring capabilities in this area.

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We reviewed earlier drafts and devoted an evening to a briefing of NFAC's multi-disciplinary study. This study treats with considerable skill a topic of far greater breadth than is usual in Agency analyses. The Panel has long been concerned about the need for a study approach that cuts across office and discipline lines, and we are, therefore, especially pleased at the success of this experiment in using a task force of teams from several offices. We hope that such approaches to inter-disciplinary analysis will be encouraged, not just in relation to a few overarching and critical themes like Soviet military power in the 1980s, but even for the more mundane elements of the NFAC research program.

As for the study itself, possibly its most important conclusion is that in the 1980s the Soviets are facing an unprecedented set of conflicting pressures in a period of major turnover in leadership. Because these events are without precedent, it is impossible to place high confidence in extrapolation from past Soviet behavior. In other words, the main estimate is that the estimates are likely to change. It is, therefore, particularly important to look for early indications of change. The Agency should start now to identify and flesh out the chief alternative possible directions of Soviet

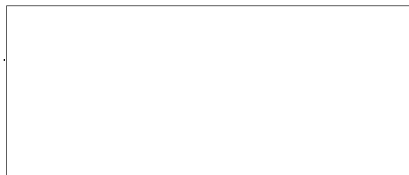
military-economic policy. A start toward such analysis is made in the report, but an indicators intelligence strategy requires an organized program to back it up.

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The final topic we would like to bring up with you concerns ways to broaden the base of professional knowledge and analysis on which the CIA can draw. We have not yet given this enough thought to present a program to you, but it is clear that CIA analysts will have to interact fruitfully with their professional peers on the outside. In order to make CIA work known to outsiders who might then work on projects for or with Agency staff, it is essential that the Agency have an unclassified publication program. This program would have a broader goal than just producing material that CIA's clients in government could handle conveniently. Communication with the academic and research communities working in areas of interest to CIA, would become a major objective of the program rather than the incidental by-product that it is today. The Office of Economic Research now publishes extensively, but it is rare to see unclassified articles from the Offices of Political Analysis or Strategic Research.

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In the fall, we will report more fully on military, economic, and perhaps political topics. In the meantime, we are available to provide whatever help you might find useful.



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